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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,466	06/29/2001	Robin Budd	EMC-00-066	6561

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EXAMINER	
CASIANO, ANGEL L	
ART UNIT	**PAPER NUMBER**
2182	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/895,466	BUDD ET AL.	
	Examiner	Art Unit	
	Angel L. Casiano	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The present Office action is in response to Appeal Brief dated November 15, 2005.

2. Claims 1-6 and 8-16 are pending.

Claim Rejections - 35 USC § 112

3. Previous rejection of claim 7 under 35 U.S.C. §112, second paragraph had been rendered moot due to the cancellation of this claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. [US 5,948,079] in view of Dierks, Jr. et al. [US 2003/0002508 A1].

Regarding claim 1, Tsai et al. teaches a computer system having a plurality of computers connected to storage system in a

network (see Figure 1, elements 104, 108, 110, 106, 102, 114), each computer having software capable of sending and receiving network (element 110) information. Tsai et al. teaches a method for receiving transmission packets and placing the transmission packets into a queue determined by the type of transmission packet (see col. 2, lines 45-60, "buffer"). This step is accomplished by the reference by having a descriptor for the packet (see col. 4, lines 1-7).

However, the reference fails to teach the step of "upon filling the buffer to a predetermined point, waking the internal thread to process the filled buffer, wherein the internal thread writes the contents of the buffer to the storage system, as claimed" (emphasis added). Regarding this limitation, Dierks, Jr. et al. teaches a computer system in a network in which, upon filling a buffer to a predetermined point (see "determines that there is at least an amount of data in the socket receive buffer equal to the value of so_rcvlen", Abstract), an internal thread is awaken to process the filled buffer (see Id.) wherein the internal thread writes the contents of the buffer to the storage system.

At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to obtain a method in which congestion and delay are

avoided when processing data segments, as taught by Dierks, Jr. et al. (see Page 5, 0056).

As for claim 2, Tsai et al. teaches submitting the transmission packets to a write buffer (see Figure 3, elements "312" and "316"; col. 4, lines 4-5).

As for claim 3, Tsai et al. fails to teach the step of, upon filling the buffer to a predetermined point, processing (transporting the packets) the filled buffer. Dierks, Jr. et al. teaches a computer system in a network in which, upon filling a buffer to a predetermined point (see Abstract), an internal thread is awaken to process the filled buffer (see Id.) wherein the internal thread writes the contents of the buffer to the storage system. One of ordinary skill in the art would have been motivated to combine the cited disclosures for the reasons stated above.

8. Claims 4-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. [US 5,948,079] in view of Dierks, Jr. et al. [US 2003/0002508 A1], in further view of Lozowick et al. [US 5,228,083].

As for claim 4, the combination of references (Tsai et al. in view of Dierks) teaches communication optimization for different speeds in data transmission (see col. 5, lines 52-67). However, the combination of references does not teach writing the packets upon unavailability of the network. Regarding this limitation, Lozowick et al. teaches a method in which inbound packets are stored in a buffer (see col. 2, lines 25-29, 51-58). Therefore, if the connection to the network is unavailable but an interface is available, packets are transmitted out of the buffer. Therefore, one of ordinary skill in the art would have been motivated to modify the combination of references in order to implement an optimized data processing method for the event of network disconnection, as taught by Lozowick et al.

As for claim 5, the combination of references (see Tsai et al.) teaches a storage system having a "send" and "receive" section (see Figure 3). The contents of the buffer are written to a second volume (see Figure 3, "312", "316"; col. 3, line 67).

As for claim 6, these volumes are located separately (see Tsai et al., Figure 3, "312", "314").

As for claim 8, the combination of references (see Tsai et al.) teaches a storage system having a "send" and "receive" section (see Figure 3). The contents of the buffer are written to a second volume (see Figure 3, "312", "316"; col. 3, line 67). The combination of references does not explicitly teach two separate volumes. Nonetheless, it would have been obvious to position the elements in the system, as part of a network, geographically apart from each other.

As for claim 9, the combination of references (see Tsai et al., col. 3, lines 6-17) teaches controlling the writing process to the buffer.

As for claim 10, the process of copying contents is done upon a command (see Tsai et al., col. 3, line 15, "controls").

8. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. [US 5,948,079] in view of Lozowick et al. [US 5,228,083].

Regarding claim 11, Tsai et al. teaches a computer system having a plurality of computers connected to storage system (see Figure 1, elements 104, 108, 110, 106, 102, 114), each computer

having software capable of sending and receiving network (element 110) information. Tsai et al. teaches a method for receiving transmission packets and placing the transmission packets into a queue determined by the type of transmission packet (see col. 2, lines 45-60, "buffer"). This step is accomplished by the reference by having a descriptor for the packet (see col. 4, lines 1-7). Tsai et al. does not teach writing the packets upon unavailability of the network.

Regarding this limitation, Lozowick et al. teaches a method in which inbound packets are stored in a buffer (see col. 2, lines 25-29, 51-58). Therefore, if the connection to the network is unavailable but an interface is available, packets are transmitted out of the buffer. Tsai et al. teaches communication optimization for different speeds in data transmission (see col. 5, lines 52-67).

Therefore, one of ordinary skill in the art would have been motivated to modify the Tsai et al. reference in order to implement an optimized data processing method for the event of network disconnection, as taught by Lozowick et al.

As for claim 12, Tsai et al. teaches reading the volume after it is written (see col. 3, lines 6-28).

As for claim 13, Tsai et al. teaches a plurality of applications (see Abstract). Nonetheless, the combination of references does not teach clustering specifically. However, one of ordinary skill in the art would have been motivated to implement clustering as part of the plurality of applications, since it is well known in the art.

As for claim 14 and 15, the combination of references teaches a computer network (se Tsai et al., Figure 1). It is well known in the art that the Internet is an example of one of the networks that would be included as part of the prior art disclosure.

As for claim 16, the combination of references (see Tsai et al.) teaches a storage system having a "send" and "receive" section (see Figure 3). The contents of the buffer are written to a second volume (see Figure 3, "312", "316"; col. 3, line 67). The combination of references does not teach two separate volumes. Nonetheless, it would have been obvious to position the elements in the system, as part of a network, geographically apart from each other.

Response to Arguments

9. Applicant's arguments, see Appeal brief, filed 15 November 2005, with respect to claims 1-6 and 8-9 have been fully considered and are persuasive. The rejection of these claims has been withdrawn.

10. Applicant's arguments, see Appeal Brief, filed 15 November 2005, with respect to the rejection(s) of claim(s) 1-6 and 8-9 under 35 U.S.C. §103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dierks, Jr. et al., U.S. 2003/0002508 A1.

11. As for claims 11-16, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Examiner has included the limitations taught by Lozowick et

al. (see Page 12 of Appeal Brief) in order to show the motivation of one of ordinary skill in the art at the time the invention was made and not to allege that these limitations are claimed by applicant. The fact that applicant has identified a motivation which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a. Heywood et al. [US 6799317 B1] teaches a method, which invokes a wake thread module that passes, awakens a thread associated with the window number, and examines the shared memory buffer for receipt of the local source message. The method then copies the local source message from the shared memory buffer to the receiving task.

b. Abbott et al. [US 6141324 A] teaches a receiver thread, which receives the messages, and places them in its buffer for use by the consumer thread (described below). If necessary, the receiver thread wakes the consumer thread so

it can retrieve and operate on the messages in the receiver buffer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel L. Casiano whose telephone number is 571-272-4142. The examiner can normally be reached on 9:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alc
03 February 2006

KIM HUYNH
SUPERVISORY PATENT EXAMINER
2/3/06